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THE SPIRIT OF AU GAY:
PUTTING THE AIR
BACK INTO
AIRLAND OPERATIONS

By
MAJOR GLENN M. HARNED
U.S. ARMY

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SCHOOL OF ADVANCED MILITARY STUDIES
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for successful air-land operations; and (3) The key to successful air-land operations is the collocation of coequal and interdependent air and land force headquarters for joint planning and execution, not at the theater strategic level, but at the operational level (field army/tactical air force).

Based on its findings, the study examines several decision issues concerning the doctrinal roles of the air and land component commanders; the importance of apportionment, allotment, and allocation to centralized control and decentralized execution of air operations; the need for an intermediate operational-level air headquarters between the numbered air force and the air wing; and the utility of current US and NATO air-land battlefield control measures.

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ABSTRACT

THE SPIRIT OF AU GAY: PUTTING THE AIR BACK INTO AIRLAND OPERATIONS by Major Glenn M. Harned, USA, 52 pages.

This monograph investigates the extent to which current US and NATO air-land doctrine provide for the effective integration of air power and land power at the operational level of war. The research hypothesis of the study is that significant differences exist between current doctrine and the doctrine that the US Army Air Forces and Ground Forces employed during World War II, and that these differences adversely affect the US capability to prosecute successful air-land operations. To test this hypothesis, the monograph analyzes three World War II campaigns (Northwest Africa, Sicily, and France) and compares them to the current US and NATO doctrines.

The study finds that certain fundamental principles govern the prosecution of air-land operations, and that these principles include: (1) There can be only one campaign in a theater of operations at any given time, and the theater commander must synchronize the actions of his subordinate commanders to achieve unity of effort in that campaign; (2) The theater commander must provide for an acceptable level of air superiority as a precondition for successful air-land operations; and (3) The key to successful air-land operations is the collocation of coequal and interdependent air and land force headquarters for joint planning and execution, not at the theater strategic level, but at the operational level (field army/tactical air force).

Based on its findings, the study examines several decision issues concerning the doctrinal roles of the air and land component commanders; the importance of apportionment, allotment, and allocation to centralized control and decentralized execution of air operations; the need for an intermediate operational-level air headquarters between the numbered air force and the air wing; and the utility of current US and NATO air-land battlefield control measures.

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INTRODUCTION

Background

AirLand Battle doctrine requires the total integration of air power and land power into a single, unified theater campaign designed to defeat an enemy force and achieve some strategic aim. Since the Army adopted this new doctrine in 1982, the Army and Air Force have made great progress in the tactical integration of air power and land power. However, as Colonel Huba Wass de Czege notes in the January 1986 Military Review, the thornier issues associated with the planning and execution of operational air-land campaigns remain unresolved. (1) As the Army's understanding of large unit operations matures, it becomes increasingly apparent that land campaign and air campaign are not useful terms. Just as combined arms tactics are the norm at the tactical level, joint air-land operations must become the norm for the design and execution of a successful theater campaign at the operational level. The Army and Air Force can no longer prosecute independent land and air campaigns; theater land and air operations are simply too interdependent.

In order to appreciate why there is no such thing as an independent air or land campaign, consider the following:

* The US Army has not fought without air superiority since 1943, and most Army operations assume that the Air Force will be able to achieve local air superiority. What is the current mechanism for insuring that the Army and Air Force understand where the other service absolutely needs air superiority, where it can make do with air parity, and where it will accept hostile air superiority in order to obtain friendly air superiority elsewhere?

* Above corps level, Air Force air interdiction operations are the primary means available to the land commander to influence the future battle he must fight. What is the current mechanism for synchronizing Air Force air interdiction efforts with the land commander's operational plans and interdiction efforts?

* Air Force battlefield air interdiction provides the corps commander with critical combat power to influence his current and future battles. What is the current mechanism for providing immediate battlefield air interdiction in response to the changing requirements of the corps commander?

The answer to these questions is the same: such mechanisms may exist in any specific theater of operations, but US joint doctrine does not address them. This being the case, the Army and the Air Force need to recognize that theater land and air campaigns do not exist as independent entities, and cooperate to develop a joint doctrine for the organization and employment of air-land forces in a theater campaign.

Scope

In his 1985 MMAS thesis, An Army and Air Force Issue: Principles and Procedures for AirLand Warfare, Major Stephen T. Rippe examined the extent to which current US Army/Air Force and NATO doctrine "provide for the effective conduct of AirLand warfare at the operational level of war." (2) Based on his analysis of the World War II Anglo-American experience in Northwest Africa and the European theater, Rippe derived five fundamental principles for the control of air power at the operational level: (3)

* The campaign plan drives all air and ground activities.

* Air superiority is fundamental and must be obtained in consonance with the goals of the campaign plan.

* Air and ground staffs should be collocated and jointly plan at the operational level.

* Air Force acceptance of missions as part of the overall campaign plan vice target by target requests is the key to our joint ability to execute AirLand warfare doctrine.

* The operational ground commander must have the ability to synchronize air and ground combat power in consonance with an operational plan.

The purpose of this monograph is to test Major Rippe's problem thesis and then design a solution that incorporates his five fundamental principles, as modified by the findings. The monograph begins with the working hypothesis that Major Rippe was correct in concluding that significant differences exist between current US and NATO air-land doctrine and the doctrine that the Army Ground Forces and Army Air Forces employed in World War II, and that these differences adversely affect US capacity to design and execute successful air-land operations. To test this hypothesis, the monograph analyzes Rippe's study in the light of three World War II campaigns -- Northwest Africa because that campaign marks the adoption of the British air-ground cooperation system by the US Army Air Forces (USAAF), Sicily because that campaign witnessed significant problems with USAAF implementation of the new system, and France because USAAF air-ground cooperation reached operational maturity during that campaign. The monograph then proposes the basis for a new joint doctrine for the organization and employment of air-land forces. Such a doctrine would greatly facilitate the maturation of US operational art.

CASE STUDIES

Northwest Africa

Before 1943, US Army doctrine treated tactical air forces like long-range artillery. The 1942 edition of Field Manual 31-35, Aviation in Support of Ground Forces, stated that an Air Support Command (ASC) (4) would be subordinated to a field army or independent corps and would work for the ground force commander, who would decide how to employ these aviation assets. The manual conceded that attacks on the enemy air force might be necessary and that local air superiority was desirable, but it also stated,

the most important target at a particular time will usually be the target which constitutes the most serious threat to the operations of the supported ground force. The final decision as to priority of targets rests with the commander of the supported unit. (5)

For the invasion of Northwest Africa, the Allied Commander-in-Chief (Lieutenant General Dwight D. Eisenhower) organized and employed his air forces in accordance with the doctrine contained in Field Manual 31-35. Two separate air headquarters reported directly to Eisenhower's Allied Force Headquarters (AFHQ). The RAF's Eastern Air Command (EAC) (Air Marshal Sir William L. Welsh) cooperated with Eastern Task Force for the amphibious assault, and later with British First Army in Tunisia). The US Twelfth Air Force (Brigadier [later Major] General James H. Doolittle) cooperated with the Center and Western Task Forces for the invasion, and later with Fifth US Army in Morocco and II US Corps in Tunisia. The AFHQ G-3 Air Section was responsible for coordinating air operations but was inadequately staffed to perform that task. Shortly after the invasion, as the Allied ground units began their advance into Tunisia, it became

apparent that this command arrangement would not work, but Eisenhower still did not appoint an overall air commander. Instead, he subordinated all forward air units, both RAF and USAAF, to the senior ground commander, Lieutenant General K.A.N. Anderson of British First Army. (6)

This arrangement also proved unsatisfactory, and on 5 January 1943 Eisenhower activated the Allied Air Force (AAF), under USAAF Major General Carl A. Spaatz, to command both Twelfth Air Force and the EAC. These three air headquarters, like AFHQ, remained well to the rear of the fighting in Tunisia and retained a theater focus; there was still no centralized control of the forward air units cooperating with British First Army and II US Corps. The Twelfth Air Force's XII Air Support Command (ASC) was ordered forward to support Major General Lloyd Fredendall's II US Corps, while EAC's 242 Group continued to support British First Army. No headquarters below Spaatz' AAF had the authority to concentrate air power decisively against an operationally significant target.

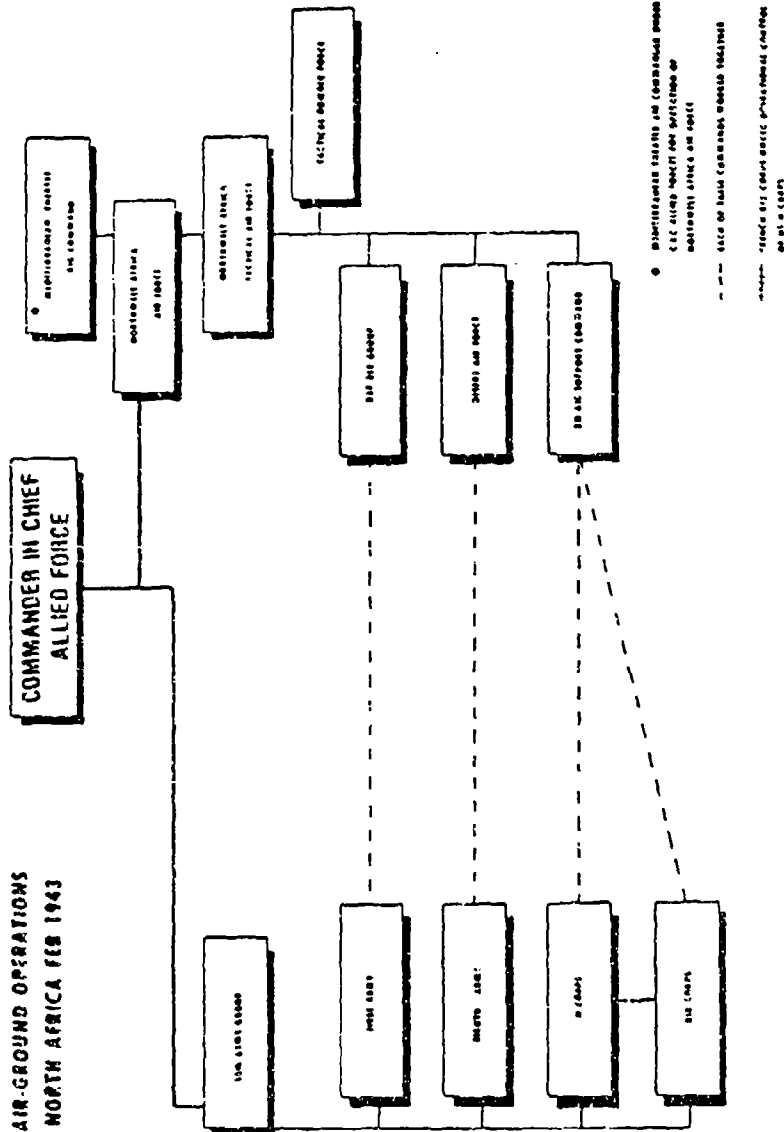
It soon became apparent to Spaatz, however, that a change was necessary. On 22 January 1943, he dispatched his A-3, Brigadier General Laurence S. Kuter, to Tunisia to activate Allied Air Support Command (AASC) and exercise operational control of both XII ASC and 242 Group. (7) Kuter's new command was operational by 25 January 1943, and centralized control of the Tunisian air battle was finally achieved. There was no immediate change in tactics, however, for Kuter continued to distribute his fighters in "penny packets" as bomber escorts and as defensive air umbrellas for ground units, rather than concentrating them in a centralized offensive counterair effort to achieve air superiority

in the theater of operations. Rippe wrote of this period, "... our air power was employed everywhere and effectively concentrated nowhere." (8) Retired General William W. Momyer, former commander of the USAF Tactical Air Command and then a fighter group commander in Tunisia, wrote,

[XII ASC and 242 Group] were trying to provide close air support before obtaining air superiority. Consequently, the German Air Force (GAF) controlled the air in northern and southern Tunisia. Friendly [air] losses were so high that the mission of the air forces and the structure of the command and control system had to change drastically ... not only had Allied airpower failed to achieve air superiority, but they had failed to provide the close air support that the Commanding Generals of 1st Army and II Corps had desired. The German fighters, by concentrating against small formations of US and British fighters trying to maintain umbrellas over ground forces throughout the day, made Allied air losses prohibitive ... Not until we in the XII ASC and the 242 Group had gained air superiority (i.e., when we could conduct missions without undue losses and interference from the enemy) could we concentrate on providing close air support. (9)

After the Kasserine Pass debacle, Eisenhower finally established an effective command structure for the Tunisian campaign. He activated 18 Army Group (General Sir Harold Alexander) as the senior operational ground headquarters, and accepted the Mediterranean Air Command (Air Chief Marshal Sir Arthur Tedder) as a combined air command for the theater of war encompassing Northwest Africa and the Middle East. Subordinate to Tedder were two theater air forces for the Northwest African and Middle East theaters of operations. Spaatz's command, redesignated as Northwest African Air Forces (NAAF), consisted of three functional air forces -- Northwest African Strategic Air Force (NASAF, under Doolittle), Northwest African Tactical Air Force (NATAF), and Northwest African Coastal Air Force (NACAF, responsible for land-based maritime air operations in cooperation

**COMMANDER IN CHIEF
ALLIED FORCE**



SOURCE: Momyer, Air Power in Three Wars, pg 257.

with Allied naval forces). Air Vice Marshal Sir Arthur Coningham moved from the RAF's Western Desert Air Force (WDAF) to assume command of NATAF. Under his command fell 242 Group, cooperating with First Army; XII ASC, cooperating with II Corps; and WDAF, cooperating with Eighth Army.

Coningham brought with him a very different system of air-ground cooperation. He and Tedder had used it with decisive results in the Western Desert campaign during the period 26 May to 21 August 1942, when Auckinleck defeated Rommel's last offensive drive toward Cairo, and Montgomery subsequently adopted it as his own after the Second El Alamein. (10) Coningham based his system on the fundamental principle, "land power and air power are co-equal and interdependent forces; neither is an auxiliary of the other." (11) As Craven and Cate wrote in The Army Air Forces in World War II,

By general admission, the foundation of the RAF's success in cooperating with the army lay in the sympathy and understanding normally existing between the commander of the Western Desert Air Force and the commander of the Eighth Army ... the army and air commanders maintained joint air-ground headquarters embodying the idea of coequal striking forces. There they worked towards a common goal, neither commanding the other's forces, yet each cognizant of the other's requirements ... With his forces centralized under his own control, Coningham had been able to seize and hold the ascendancy in the air without which he could not have efficiently aided the Eighth Army ... Coningham's coequal status with the army commander allowed him to exploit to their mutual advantage the peculiar capabilities of air power. (12)

From his new advanced headquarters near the advanced headquarters of Alexander's 18th Army Group, Coningham abandoned defensive "penny packets" tied to ground units, and in their place ordered offensive strikes against enemy airfields. Momyer recalls Coningham telling him,

Colonel, the first thing we are going to do is get out and destroy the German air force. When we have destroyed the German air force in North Africa, we will do all the air support and anything else that the Army wants. But until we get those airfields and get those German airplanes off our back, we are not going to do anything else. (13)

Cunningham had stood up to Montgomery and won on this issue in the Western Desert. Now he stood up to Patton in Tunisia, and won again. It was thus Cunningham who introduced the USAAF to the concept of theater air superiority.

The Tunisian experience left the air and ground commanders in disagreement over the proper relationship between air and ground units and the proper degree of centralized control over air power. US ground commanders, unable to get the kind of offensive air support that Montgomery received in the Western Desert, wanted specific air units placed under their continuous control; they did not yet recognize the importance of centralized counterair operations. Spaatz, however, was convinced that Cunningham's doctrine was correct. He had Kuter draft a new Field Manual 100-20, Command and Employment of Air Power, codifying Cunningham's doctrine, and got the War Department to approve it, over the objections of Army Ground Forces, for implementation throughout the USAAF.

The new field manual began with the three fundamental principles of Cunningham's air doctrine: (14)

Land power and air power are co-equal and interdependent forces; neither is an auxiliary of the other.

The gaining of air superiority is the first requirement for the success of any major land operation ... Land forces operating without air superiority must take such extensive security measures against hostile air attack that their mobility and ability to defeat the enemy land forces are greatly reduced. Therefore, air forces must be employed primarily against the enemy's air forces until

air superiority is obtained.

The inherent flexibility of air power is its greatest asset ... Control of available air power must be exercised through the air force commander if this inherent flexibility and ability to deliver a decisive blow are to be fully exploited.

Using the Northwest African Air Forces as a model, Field Manual 100-20 stated that a theater of operations would normally have one air force, reporting directly to the theater commander and responsible for all air operations in the theater. A theater air force would normally consist of a strategic air force, a tactical air force, an air defense command, and an air service command. (15) The manual clearly established three phases of tactical air operations in the following order of priority: counterair operations, "To gain the necessary degree of air superiority"; air interdiction, "To prevent the movement of hostile troops and supplies into the theater of operations or within the theater" (isolate the battlefield); and close air support, "To participate in a combined effort of the air and ground forces ... to gain objectives in the immediate front of the ground forces." (16) The manual went on to state, "In order to obtain the necessary close teamwork the command posts of the Tactical Air Force and of the ground force concerned should be adjacent or common". (17) However,

The endless conflict could not be resolved [in the field] except by a more comprehensive approach to tactics than either ground or air officers were in the habit of employing [italics added], and remained to be worked out in subsequent months when Allied air resources were more plentiful." (18)

Sicily

Operation HUSKY represented the first full-fledged use by USAAF of its new doctrine in a major operation. The Sicily

operation demonstrated the problems associated with employing the British committee system of command to wage war at the operational level. Eisenhower now had coequal ground, air and naval component commanders to control their parts of the Sicily operation, but they did not collocate their headquarters for joint planning. Eisenhower acted as "chairman of the board" but chose not to actively synchronize his component commanders' efforts or to identify and resolve their disputes, unless the component commanders themselves brought them to his attention. (19) The Air Force was particularly guilty of acting like an independent as well as coequal command. Craven and Cate wrote,

the air plan dealt for the most part with broad policies and .. had not been integrated in detail with ground and naval plans. This was deliberate, and the result of sound strategic and tactical considerations emphasized by experience in the Tunisian and Western Desert campaigns. There would be no parceling out of air strength to individual landings or sectors. Instead, it would be kept united under an overall command in order to assure in its employment the greatest possible flexibility. (20)

The official Army history portrays the problem quite differently. According to Garland and Smythe, the air plan for the Sicily operation provided no concrete information on the amount and type of air support or defensive counterair protection that ground and naval commanders could expect on D-day. The XII ASC had the mission of cooperating with Seventh US Army, but all sixteen of its fighter and fighter-bomber squadrons had been placed under the operational control of RAF Malta Command or NATAF itself, and the only D-day support XII ASC could provide was eighteen tactical reconnaissance sorties. (21) During the first two days of the invasion, when Axis armored forces counterattacked to repel the amphibious assault, "no close air support missions were flown in

support of the Seventh Army, and no close support missions were handled by the air support parties with the II Corps and with the assault divisions until 13 July." (22) Craven and Cate concluded,

During HUSKY, some US commanders continued to experience difficulty in accepting command arrangements which gave full control of air forces to the air commander ... But it was generally admitted that once the invasion was underway the new system worked so successfully that ground casualties from enemy [air] action were comparatively light, that shipping suffered little molestation, and that cooperation between Allied air and ground forces was satisfactory. Perhaps the principal criticism of the operations by the air arm on behalf of ground troops was that air support arrived too slowly when the Germans counterattacked during the first week of the invasion. (23)

By this conclusion, Craven and Cate assume away the problem. By the end of the first week of HUSKY, Spaatz' NAAF had achieved air superiority and did provide adequate close air support. Before then, however, the ground forces suffered from the lack of detailed planning for air-ground cooperation and from an air apportionment decision that focused on counterair and interdiction missions to the exclusion of close air support for ground operations during the critical amphibious assault. The air commanders learned three important lessons that were not mentioned in the official USAAF history. First, the theater commander must synchronize his air commander's offensive counterair operations with the land commander's plan in order to achieve an acceptable level of air superiority prior to commencement of the land operation, so that tactical air units are available for close support when the land forces need it. Second, the air commander cannot fight Field Manual 100-20's three phases of tactical air operations consecutively. Once an acceptable degree of air superiority is achieved and land forces are committed to combat, the theater commander has to make an apportionment decision that

directs all three phases to continue concurrently. Third, the theater commander must insure "combined staff planning and close coordination and cooperation between the air and surface commanders in the execution of their respective missions." (24)

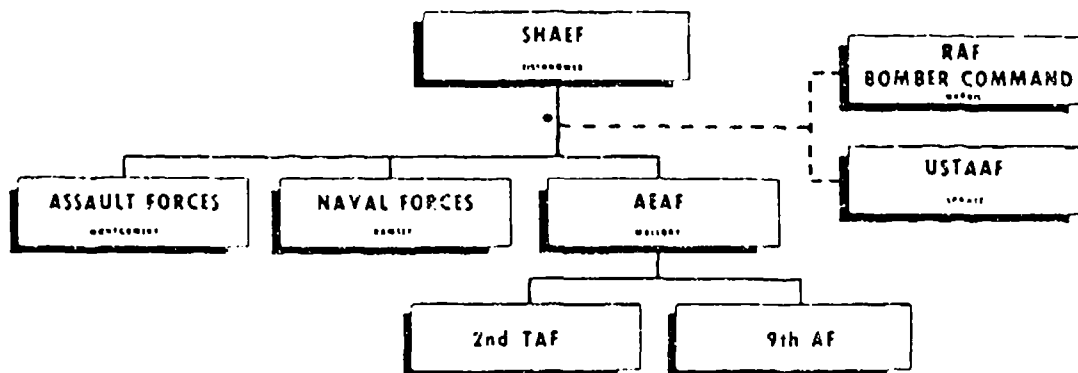
France

In the European Theater Of Operations (ETO), air-ground cooperation finally came together for the Allies. The Normandy invasion, Operation OVERLORD, was a military operation of immense complexity, and air power played a major role in its success.

For the OVERLORD invasion and the subsequent campaign across France, Eisenhower's Supreme Headquarters, Allied Expeditionary Force (SHAEF) established the Allied Expeditionary Air Force (AEAF) under Air Marshal Sir Trafford Leigh-Mallory. He exercised operational control over RAF Second Tactical Air Force, RAF Air Defence of Great Britain, and US Ninth Air Force. He did not, except for certain distinct periods, have any control over the strategic air forces -- Air Chief Marshal Sir Arthur Harris' RAF Bomber Command and Lieutenant General Spaatz' US Strategic Air Forces in Europe (USSTAF).

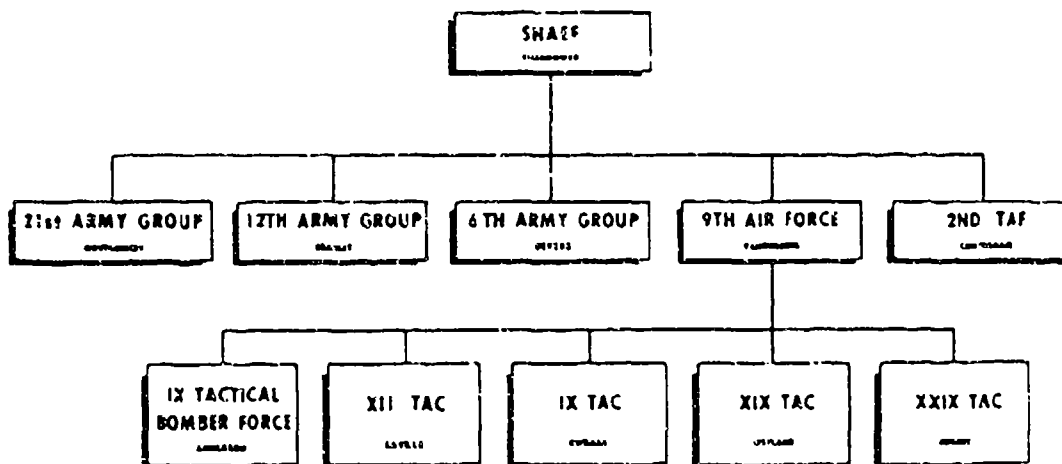
There were several reasons why Leigh-Mallory, as Air Commander-in-Chief, controlled only the tactical air forces in the theater. First, Spaatz did not trust Leigh-Mallory, an outsider (he had not served with the "Mediterranean mafia" that dominated SHAEF) who disagreed with the USAAF assessment that air supremacy was a precondition for the Normandy invasion. More important, Spaatz feared that if the AEAF became a theater air command controlling all the strategic and tactical air forces, it would divert the heavy bomber force away from the strategic bombing

COMMAND ORGANIZATION FOR OVERLORD



• BOMBER FORCES UNDER OPERATIONAL CONTROL OF THEATRE HEADQUARTERS AND AIRFIELD AND COMBINATION POINTS

FINAL ORGANIZATION AFTER INVASION



SOURCE: Momyer, Air Power in Three Wars, pp 49 and 52.

campaign that the USAAF wanted to wage against Germany. Finally, Spaatz did not want US strategic air forces subordinated to the British, with whom he violently disagreed both doctrinally and morally. (Spaatz favored daylight precision bombing and considered the RAF night "city busting" to be immoral if not illegal.) In a compromise solution, Tedder (by now the SHAEF Deputy Supreme Commander) coordinated the activities of the AEF, USSTAF, and RAF Bomber Command in support of OVERLORD, while Leigh-Mallory remained titular Air Commander-in-Chief.

After 15 September 1944, when Eisenhower assumed personal responsibility (from Field Marshal Bernard L. Montgomery, the senior army group commander) for the coordination of ground operations on the Continent, Spaatz proposed that AEF be abolished. Spaatz argued that a theater tactical air command was not needed to control the three tactical air forces in the theater and to maintain close contact with the army groups. Eisenhower accepted Spaatz' advice and disbanded AEF on 15 October 1944. Thereafter, the ETO had no theater air command. The SHAEF Air Section, operating under the guidance of Tedder as Deputy Supreme Commander and the theater's senior airman, performed the functions of the theater air command. Momyer concluded that this command arrangement "was not a model for the future," (25) but Eisenhower, Tedder, Spaatz, and the three tactical air force commanders cooperated to make it work.

Below theater level, SHAEF modeled its organization for air-ground cooperation after Coningham's North African organization, with field army/tactical air command air-ground teams under army group/tactical air force direction. The Ninth Air

Force (commanded initially by Major General Lewis H. Brereton, then by Major General Hoyt S. Vandenberg) cooperated with 12th Army Group (Lieutenant General [later General] Omar N. Bradley) and commanded three tactical air commands (TAC, redesignated from ASC in April 1944) that cooperated with the US field armies --- IX TAC with First Army, XIX TAC with Third Army, and XXIX TAC with Ninth Army. Air Marshal Coningham's Second Tactical Air Force similarly cooperated with 21st Army Group (General [later Field Marshal] Bernard L. Montgomery). The tactical air force (TAF) commanders shifted air units among their subordinate TACs and air groups in response to operational requirements, and when the strategic situation warranted it, passed operational control of air units between the tactical air forces. For example, IX TAC passed to Second TAF during the Ardennes operation, at the same time that First US Army passed to 21st Army Group. (26)

The US Ninth Air Force was, by May 1944, the strongest tactical air force in the world. It was organized with three tactical air commands (TACs), a bombardment command (later redesignated as a division), an air defense command (with responsibility for the air defense of the Communications Zone), an engineer command (for airfield construction and repair), and an air force service command (for logistical sustainment). Its general mission was to cooperate with 12th Army Group by performing the three priority tactical air operations prescribed in Field Manual 100-20 -- air superiority, air interdiction, and close air support. Its area of operations extended approximately 200 miles beyond the forward lines, and in good weather it averaged as many as 2000 sorties a day. (27)

Ninth Air Force assigned each TAC a variable number of fighter- bomber groups (normally four to eight) and one reconnaissance group, and made it responsible for all offensive and defensive fighter-bomber operations and routine daily reconnaissance in cooperation with its habitually associated field army. Based on its joint planning with the field army, the TAC allocated its available air resources to the three priority tactical air operations, as the situation demanded on its own front. (28) Its Combat Operations Center scheduled all missions, selected weapons loads, and determined level of effort. Combat Operations also made the immediate decisions to divert available air efforts and concentrate it against targets of opportunity. When the TAC's air requirements exceeded its resources, Combat Operations would request additional resources from Ninth Air Force headquarters. At TAC, as at Ninth Air Force, the associated ground force located its G-2 Air and G-3 Air staff sections within, or physically adjacent to, Combat Operations. Also physically adjacent to TAC Combat Operations was the TAC's Tactical Control Group, which served as the senior radar control facility in the tactical air control system. (29) However,

Although the TACs were granted unusual latitude in control of their tactical units, [Ninth Air Force] control was never allowed to become superficial. Air force retained full prerogative to shift forces from one TAC to another or to combine and employ the forces of all TACs on any of several fronts when necessary to implement air force-army group plans or to meet critical situations at any point in the army group area. (30)

To demonstrate the flexibility of this system, one need only look at group assignments during the campaign across France. When only First Army was operational on the Continent, IX TAC controlled eighteen fighter-bomber groups. After Third Army and

XIX TAC became operational on 1 August, each TAC normally controlled nine groups. When Ninth Army and XXIX TAC became operational on 2 October, each of the existing TACs provided it two groups, but XXIX TAC varied in strength from two to five groups throughout most of its existence. (31)

Ninth Air Force organized and employed its medium and light bombers quite differently. They were centralized under the command of IX Bomber Command (later 9th Bombardment Division) and employed in air interdiction operations against static targets such as communications centers, bridges and railway yards, supply depots and fuel and ammunition dumps. The Ninth Air Force advanced headquarters [as opposed to the TACs], in cooperation with army group, was best able to decide the relative importance of these targets. Moreover, the bombardment division maintained, at its relatively static headquarters, the large operations staff required to determine the many details of extensive tactical bombardment [air interdiction] operations, so that the Ninth Air Force advanced headquarters could remain more mobile.

At the end of the war, Ninth Air Force wrote of its centralized control and decentralized execution, (32)

Delegation of considerable operational freedom by the Ninth Air Force to the bombardment division and tactical air commands was tactically sound and effective. Such delegation was necessary to maintain the high degree of mobility for the air force's Advanced Headquarters and to permit the TACs to work directly and rapidly with their associated armies.

... it is axiomatic that fighter-bomber operations must be closely controlled by the tactical air commander through the TAC fighter control center and that the TAC itself must work very intimately with its associated army in providing close air cooperation ... [However] it was demonstrated repeatedly that the commander of a tactical air command, deeply engrossed in and intimately associated with the ground campaign, is subject to many strong influences to insure the maximum amount of close air

cooperation in his area of responsibility at the possible expense of the proper employment of the air force as a whole in the combined air and ground battle. The proper employment of the air force as a whole requires sound and frequently defined policies specifying the amount of fighter-bomber effort available for close cooperation with the ground forces and frequent readjustment of the number of fighter-bomber groups assigned to any one TAC to meet the changing tactical situation ... [Therefore it is recommended] that air force control of fighter-bomber operations, through the tactical air commands, be exercised by establishment of definite policies as to the allocation of forces available within the TACs to each of the three phases of tactical air operations [OCA, AI and CAS], assignment of semipermanent interdiction or airfield neutralization commitments, appropriate readjustment of the overall force available to each tactical air commander and designation of relatively few daily targets or tasks, including bomber escort."

In making the SHAEF pre-invasion apportionment decision, Air Chief Marshal Tedder and the USAAF commanders argued successfully that the Allies would have to obtain **air supremacy** before the invasion, in order to provide proper air support to the land forces once the invasion began. Eisenhower agreed to make the destruction of the GAF the primary objective of the Allied air forces, and during the preinvasion period offensive counterair operations remained the AEF's first priority. (33) By D-day,

The GAF had suffered decisive defeat. That defeat was brought about by attrition of the German fighter forces in the air and on the ground, by the consequent deterioration in quality of the German fighter pilots, and by attacks on German aircraft production which caused delay in the expansion of the German fighter force. Allied air superiority thus gained was maintained throughout the European war by the combined efforts of the RAF and USAAF through continued attrition, through destruction of the sources of aircraft fuel, and through disruption of the GAF system of supply, repair and dispersed manufacturing facilities by attacks on the entire transportation network. (34)

Because the counterair operations against the GAF had already been decisive, AEF from D-day until the German surrender was able to devote almost all its assets to air interdiction and

close air support. On D-day, AEAf flew over 14,000 sorties in support of the invasion, at a loss of only 127 aircraft! (In contrast, the GAF flew 275 sorties that day, at a loss of 39 aircraft.) Last-minute attacks completed the destruction of all twelve railway and fourteen highway bridges over the Seine, completely isolating the beachhead. Other preplanned D-day missions focused on the invasion area itself, and when the air support parties began to function, AEAf flew its first close air support missions of the campaign.

By 10 June Major General Elwood R. "Pete" Quesada's IX TAC Advanced was established ashore, one hedgerow from Bradley's First Army headquarters at Au Gay,

and in such an environment the welding together of ground and air for the achievement of a common purpose was advanced by the intimate association of the respective commanders and by the closest sort of cooperation ... Army's G-2 and G-3 were often to be found in IX TAC's operations tent. Mutual understanding and confidence ripened, and a steadily improved efficiency in operations was traced by the supreme commander to its source at Au Gay. (35)

Before the COBRA breakout from Normandy, "the chief contribution of fighter-bombers was the almost total restriction of enemy movement and reinforcement during flyable daylight hours to a depth of approximately 30 kilometers behind the lines." (36) After the breakout, when Third Army began its exploitation across France, Ninth Air Force exercised its prerogative to concentrate its air power in western France. It shifted fighter-bombers from XIX TAC to IX TAC in response to the German counterattack at Mortain, then shifted IX TAC fighter-bombers to XIX TAC during Third Army's rapid advance. It concentrated both TACs to reduce the Falaise pocket in mid-August. When the Allied pursuit finally

stalled and the front stabilized in eastern France, Ninth Air Force shifted its emphasis from close air support to the interdiction of German efforts to reinforce their new defensive positions. The campaign for France was over.

CURRENT DOCTRINE

US Doctrine

The intent of current US Army/Air Force doctrine for joint attack of the second echelon (J-SAK) is "to provide a generic joint doctrine which allows a theater the flexibility to modify this doctrine in accordance with its specific requirements and peculiarities." (37) It establishes the doctrinal requirement for each Joint Force Commander (JFC) to exercise operational command of his assigned forces through coequal and interdependent air and land component commanders who directly control the warfighting operations of their functional commands. The Land Component Commander (LCC) is the designated senior land commander in the joint force. He is normally a field army or army group commander, although an independent corps commander could also perform as LCC if it is the senior operational land force headquarters. The Air Component Commander (ACC) is the designated senior air commander in a joint force. He is normally a tactical air force (TAF) commander. (38) He provides general support to the land forces by conducting counterair (CA) and air interdiction (AI) missions; and close combat support by conducting close air support (CAS) missions in close proximity to friendly land forces. (39) As Quesada explained after World War II, "This is not to imply that a tactical air force is solely a supporting arm, or that it is concerned primarily with direct support of the Army. Rather, it

functions as a separate entity and its operations may actually take the form of indirect assault without immediate results." (40)

The JFC, after consultation with his subordinate commanders, makes the air apportionment decision. (41) In making the apportionment decision, the JFC also determines the level of battlefield air interdiction (BAI). (42) Based on the JFC's decision, the ACC makes the air allocation decision. (43) Doctrinally, the ACC and LCC consult and coordinate with each other; their staffs do not collocate, nor do they jointly plan or execute air-land campaigns. The ACC exercises command and control of his assigned forces through the Tactical Air Control System (TACS) and its senior control element, the Tactical Air Control Center (TACC) [the direct descendent of the World War II Combat Operations section]. The TACC manages the current operations of all preplanned tactical air operations, including close air support. The TACC selects weapon systems, air units, force package composition, times on target, ordnance, and other details of each mission, then disseminates this information in Air Tasking Orders (ATO) to the air units and other appropriate TACS agencies. (44)

Joint coordination occurs at the TACC, where the LCC (or the JFC when there is no LCC) collocates a liaison and coordination element designated as the Battlefield Coordination Element (BCE). The BCE places Army representatives in every major TACC staff division, to provide for the exchange of intelligence and operational data, and the coordination of operational planning. The LCC establishes the priority for tactical air support to each subordinate land force, and provides this to the TACC through the BCE. The LCC also nominates AI and BAI targets through the BCE.

Although the LCC can prioritize his BAI target nominations, the ACC exercises centralized control over all theater AI operations, including final approval of the LCC's prioritized BAI target list.

An Air Support Operations Center (ASOC) is normally collocated with each corps headquarters. The ASOC concept evolved to provide more flexibility in the use of close air support at corps level. Prior to the ASOC concept, there was very little decentralized control below the field army/tactical air force level. The corps air liaison officer (ALO) did not receive an allocation of CAS sorties; rather, he received his CAS in the form of preplanned requests approved by the field army commander. The ASOC enlarged the duties of the corps ALO by providing him with more responsibility for the employment of the corps' CAS sorties. In US doctrine, the ASOC does not plan, coordinate, or direct tactical air operations in support of the corps; its primary function is to execute immediate close air support requests by scrambling alert sorties or diverting preplanned sorties in accordance with the changing priorities of the corps commander. The ASOC cannot plan and execute immediate BAI because it does not have the air assets or the staffing for force packaging. Thus, as Rippe wrote, "Although the land force planning for BAI targets is focused at corps level, the [US] ASOC is not a joint planning cell where the Air Force and Army can operationally plan the synchronization of forces." (45)

NATO Doctrine

Although NATO tactical air doctrine parallels current US doctrine, there are three fundamental differences. First, NATO groups CAS, BAI, and tactical air reconnaissance (TAR) as

Offensive Air Support (OAS). BAI is thus considered a direct support asset of the land forces, not a subapportionment of AI to be centrally managed at theater level. NATO BAI is managed jointly at the army group/ATAF level and is distributed to the corps/ASOC level; both levels have the near-real-time surveillance capability to perform the BAI targeting function.

Second, NATO's tactical air forces truly practice centralized control and decentralized execution. NATO's Central Region has an operational problem of scale that US doctrine, written for smaller US unilateral contingency operations, does not anticipate or adequately address. Allied Forces, Central Europe (AFCENT) is the headquarters of a combined theater of operations that may control over one million soldiers and 2000 combat aircraft in wartime. AFCENT has three primary subordinate commands: Northern Army Group (NORTHAG), Central Army Group (CENTAG), and a theater tactical air command -- Allied Air Forces, Central Europe (AAFCE) -- exercising operational command over two allied tactical air forces (ATAF). Second ATAF collocates and cooperates with NORTHAG and Fourth ATAF collocates and cooperates with CENTAG. Because there is no operational land component headquarters, the land forces and air forces interface at the army group/allied tactical air force level, just as they did in the ETO during World War II.

Although AAFCE exercises operational command of all Allied air forces assigned to the theater, it does not operate a theater-level TACC. Most functions performed by the USAF TACC are decentralized to the ATAF, the Allied Tactical Operations Center (ATOC), or the ASOC. Each ATAF has operational control of its

assigned and allotted resources, and operates an Air Command Operations Center (ACOC) that collocates with the counterpart AG headquarters to plan and execute air-land operations jointly. Each ATAF controls two ATOCs that exercise tactical control of allocated air resources to manage offensive air operations (OCA, AI, and OAS) for a portion of the AG/ATAF area of responsibility, much as the TACs did in the ETO, except that the ATOC has no counterpart land headquarters. Each ATOC in turn controls the ASOCs collocated with the corps within its geographic area of responsibility. The NATO ASOC is similar in function to the US ASOC, except that it jointly plans and coordinates for all corps OAS, not just CAS.

The Allied Commander-in-Chief (CINCENT) makes the AFCENT apportionment decision by determining the percentage of the total expected air effort that he will devote to each AG/ATAF and to each type of tactical air operation (OAS, AI, CA). Based on the apportionment decision, AAFCE publishes a Daily Air Directive that allots (46) tactical air units and allocates his centrally controlled special purpose air assets (electronic warfare, air defense suppression, special reconnaissance and surveillance, and aerial refuelling aircraft) to the ATAFs. The ATAF Commander, after joint deliberation with the AG Commander, then publishes a Daily Operations Order that allocates his air resources in terms of the number of sorties by aircraft type and type mission that can be flown. Once it receives the ATAF allocation decision, the ATOC publishes an Air Tasking Order (ATO) that distributes OAS missions to each corps/ASOC according to AG priorities, and tasks specific air units to fly those OAS missions as well as OCA and AI

missions in support of the AG/ATAF as a whole.

Third, NATO defines BAI and AI in geographic, as well as functional, terms. NATO divides the Central Region into five zones because the theater is simply too large to direct all tactical air operations from one centralized headquarters. In zone five, beyond the forward limit of the AFCENT area of responsibility, Allied Command, Europe (ACE) conducts deep AI operations. In zone four, AFCENT/AAFCE conduct AI missions out to the forward limit of the AFCENT area of responsibility. The army groups and their associated ATAFs jointly plan and target AI missions beyond the AG Reconnaissance and Interdiction Planning Line (RIPL) (47) but short of zone four. The corps and their collocated ASOCs jointly plan and target BAI missions and nominate army group AI targets beyond the Corps Fire Support Coordination Line (FSCL) (48) but short of the AG RIPL. Short of the FSCL, the divisions employ CAS and nominate corps BAI targets to fight the current close-in battle. Thus, in practice, NATO BAI is that portion of OAS flown short of the AG RIPL to affect current land operations, but not in close proximity to friendly land forces, while all missions beyond the RIPL are considered to be AI, flown against the enemy's military potential to affect future land operations. (49)

FINDINGS

This monograph began with Rippe's five fundamental principles for the control of air power at the operational level. The purpose of this section is to test each of these principles against the monograph's historical and doctrinal findings, and then to modify them as appropriate before proposing a doctrinal solution for their implementation.

The Theater Campaign

The author assumed in his introductory remarks that there can be only one campaign in a theater of operations at any given time, that the theater commander must synchronize the efforts of all his subordinate commanders to achieve unity of effort in the design and prosecution of that campaign, and that success in any continental campaign will probably belong to the commander who most fully integrates air and land operations into a unified air-land campaign. Nothing in this study contradicts that assumption, and the evidence from all three World War II campaigns fully support it.

Air Superiority

Cunningham's principle remains valid. The theater commander must provide for air superiority first, by organizing a theater air force with the flexibility to concentrate air power anywhere in the theater of operations and then employ that air power primarily in counterair operations until it achieves an acceptable level of air superiority. The Army's draft Field Manual 100-5 recognizes this principle when it states,

The first consideration in employing air forces is gaining and maintaining the freedom of action to conduct operations against the enemy ... Control of the air environment enables land forces to carry out a plan of action without interference from an enemy's air forces. Without this control, tactical flexibility is lost. (50)

Having stated the principle, it is important to note that air superiority does not necessarily mean air supremacy (51) and should not, except in unusually adverse circumstances, require all the air force's resources. Indeed, some air resources cannot be used in the air superiority role. Air superiority is not an end in

itself, but merely a means to facilitate other air, land and naval operations. If too much of the theater air force is devoted to counterair operations in an unnecessary effort to achieve air supremacy -- as was the case in Sicily -- land operations will suffer. Conversely, if too much of the air effort is diverted to support of land operations before sufficient air superiority is established, air and then land losses will become prohibitive. It is the responsibility of the theater commander to determine what degree of air superiority is operationally acceptable in the theater, and to apportion his air resources accordingly.

Headquarters Collocation and Joint Planning

All three World War II case studies indicate the desirability of collocating the operational air and land force headquarters (field army/ tactical air force) for joint planning and execution. US doctrine on this subject differs significantly from NATO doctrine, which generally reflects the successful World War II Anglo-American model for the control of air-land operations. NATO continues to recognize the World War II distinction between the theater air force and the tactical air force, and it employs the ATOC as an intermediate air headquarters below the ATAF level. In contrast, the US Air Force has no intermediate air headquarters between the tactical air force and the wing, and in unilateral (J-SAK) doctrine confuses the tactical air force with the theater air force.

Under J-SAK the ACC exercises direct control of his wings in combat. Whereas the US system is in theory more flexible because it centrally manages all air resources at theater level, in a large theater the overcentralization and micromanagement which the

system encourages may cause the US system to break down in wartime. Thus, in practice, the US system may not be as responsive as the NATO system. Neither does the US system fully integrate air and land operations, for while the Air Force acknowledges the Army's primary interest in CAS and secondary interest in BAI, neither the Army nor the Air Force recognize the historical requirement for joint planning and execution -- vice coordination and consultation -- to synchronize AI and CA operations with land operations beyond the FSCL.

The Army shares the blame for these deficiencies. The Army eliminated the field army and lost its focus on the operational level of war, while at the same time insisting on CAS "penny packets" to supplement its organic field artillery. The Army, displaying a parochial attitude similar to the Air Force's attitude with regard to air operations, kept the Air Force from operating at the operational level of war by excluding it from the planning of land operations. The Air Force remained content to accept eight-digit target coordinates and to operate at the tactical level without knowing why a particular target was important or what effect it had to have on that target. Neither Service appeared willing to sit down with the other and fight the war as a joint effort.

As both Bagnall and Hine mention, (52) the collocation of operational air and land headquarters is easier said than done. The land force commander, not being heavily dependent upon communications to the rear, prefers a mobile headquarters located well forward to facilitate regular liaison with his subordinate units, prevent overextended communications, and achieve security

through a combination of concealment and mobility. His air force counterpart faces a very different situation. If collocated with the land force headquarters, he will be forward of most of his air units and his intelligence sources, heavily dependent on rearward communications, and more vulnerable than he would be in a hardened static headquarters located well to the rear with his air units. There is nothing new or profound about these competing situations -- they existed in World War II and both the RAF and the USAAF developed advanced TAF/TAC headquarters with the same tactical mobility as their counterpart land force's main headquarters. There needs to be a workable compromise solution.

Rippe correctly concluded, "the joint doctrinal principles and practices as practiced in Central European NATO most closely approximate historical antecedents and provide for the most effective conduct of AirLand warfare at the operational level of war under modern conditions." (53) When one considers that NATO is our largest and most important alliance, and that a large percentage of Army and Air Force units are earmarked for NATO, the military requirement for standardization suggests the US should adopt the NATO tactical air doctrine as its own, particularly since that doctrine appears -- on the basis of this monograph's case studies -- to represent a more effective approach to warfighting than current US unilateral doctrine. Now that the Army has reconsidered its position on these matters, regained the same theater perspective that the Air Force has always had, and recognized the requirement for operational synchronization with the Air Force, it is time to rewrite the US doctrine.

Mission Air Requests

Rippe contends that Air Force acceptance of mission air requests as part of the overall campaign plan -- vice target by target requests -- is the key to the joint execution of air-land operations. He wrote, "This seemingly innocuous procedure has tremendous implications for Army and Air Force mutual support and cooperation." (54) His primary argument is that current targeting procedures may break down in a fluid combat situation, and "not provide the responsiveness necessary to disrupt, delay, or destroy enemy follow-on forces." (55)

This monograph found Rippe's principle correct. An operational land commander should be able to make mission air requests, and the tactical air commander should decide whether to accept or reject those requests. Given the collocation of operational air and land headquarters, a joint targeting cell should be responsible for translating into specific targets those mission requests that the tactical air commander decides he can support. Within the collocated CENTAG/4ATAF headquarters, for example, there is a joint targeting cell. The corps submit daily air campaign feeder reports that state their priority air requirements for the next four days and the impact of those requirements going unsupported. A corps may state that its first AI priority is to delay a particular enemy division east of some geographic location for 24 hours, its second AI priority is to destroy a particular point or area target, and its third AI priority is to destroy the independent tank regiment of a particular second echelon army. Once the ATAF commander consults with the army group commander and decides which requests are

supportable and which to accept, the joint AG/ATAF targeting cell analyzes those requests, translates the missions into specific targets, and then directs an ATOC to execute the missions. Under this procedure, there is no requirement for the Air Force to process an accepted mission air request by itself; the request is handled by a joint targeting cell with expertise in both land and air operations. A joint targeting cell at corps/ASOC level similarly processes the divisions' mission requests for OAS. Based on the author's experience during a BLUE FLAG exercise and a NATO CPX, the above procedure is far superior the current US doctrine. Any future joint US doctrine for air-land operations should incorporate the use of the NATO air campaign feeder report to facilitate the synchronization of air and land operations by collocated headquarters with joint planning and targeting cells.

Operational Control of BAI

Rippe stated that the operational land commander must have the ability to synchronize air and ground combat power in accordance with his operational plan. He believed "the corps has supplanted the [field] army in the conduct of operational warfare". (56) As a result, Rippe recommends the Air Force separate BAI from AI, define BAI and CAS as close combat support, and treat BAI procedurally the same way it treats CAS -- to be distributed down to corps level for management by an enlarged ASOC capable of directing BAI missions -- so that the Army will designate BAI targets rather than simply nominating them for Air Force approval. This monograph's findings support Rippe's case. The manner in which Rippe presents his case, however, implies a desire to make the Air Force a junior partner in the joint

planning process at corps level. Rippe retains the Army's corps perspective, rather than looking at the issue of operational control of air assets from the theater perspective. In so doing, he ignores two principles: coequal and interdependent air and land forces, and centralized control and decentralized execution of air operations.

Coequal and Interdependent Air and Land Forces

Right now the Air Force is neither coequal nor interdependent. There is presently no separate and operational LCC headquarters in existence anywhere in the world. (57) In practice, the theater ACC is normally senior to the land force commanders subordinate to the theater JFC, both in operational perspective and size of operational area. Without any doctrinal requirement for synchronization beyond the FSCL/BAI level, the ACC is not interdependent but independent.

US tactical air doctrine should restore the original balance established in 1943: coequal air and land headquarters, not at theater strategic level but at the operational level. The tactical air force must serve two equally important functions. First, it must execute tactical air operations in its geographic area of the theater of operations. Second, it must cooperate with its counterpart field army headquarters in the joint planning and execution of air-land operations. This last function places a demand on the Army to provide a field army headquarters for each tactical air force, for the Air Force has always agreed to provide a tactical air force for each field army. The Air Force is right -- the Army must replace its corps orientation with a theater perspective. The logical follow-on question is, "Is the Air Force

willing to relinquish some of its traditional [post-1947] prerogatives once the Army does what the Air force has asked it to do?" In NATO, the Air Force appears willing to concede that the land and air forces should jointly plan and execute air-land operations, to include the joint planning and targeting of air interdiction at collocated headquarters. Is the Air Force equally willing to accept this level of jointness in a US unilateral contingency operation, once the Army establishes a field army for the tactical air force to collocate with?

Centralized Control and Decentralized Execution

Despite Air Force protests to the contrary, the current US Air Force doctrine encourages centralized control and execution. Every history of World War II tactical air operations emphasizes that the key to air-ground cooperation was the collocation of operational air headquarters at army group and field army level, yet the US theater air force TACC makes virtually all operational and tactical decisions; the air units merely execute specific missions as directed by the ATO. In NATO, AAFCE centrally directs all tactical air operations through a decentralized decision-making process that is more flexible and more responsive than the US system, while retaining the capacity to concentrate air power anywhere in the theater

Even so, the NATO system invites little initiative at wing level because the air tasking orders include no rationale for why their tactical missions are important or how they support a particular air or land operation, or the overall campaign plan. This study found numerous examples of World War II TACs issuing mission orders to their fighter-bomber groups in the ETO. The Air

Force should investigate the advantages of mission-oriented air tasking orders to air wings -- a topic beyond the scope of this monograph, but one that appears to have as much merit as the mission air request does in Army channels.

DECISION ISSUES

It is now time to examine current doctrinal issues in light of the World War II case studies and the seven principles discussed in the last section.

Doctrinal Roles of the Air and Land Components

Both the Army and the Air Force have recognized that the first iteration of AirLand Battle was fundamentally flawed in its corps-oriented approach to the problem of theater warfare. Looking at AirLand Battle from the Air Force's traditional theater perspective, Air Force Colonel Thomas A. Cardwell called on the Army to bring back the field army as the proper counterpart headquarters to interface with the tactical air force. (58) Like his student Rippe, Colonel Wass de Czege argues that the Army and Air Force should both recognize that the current Army corps is the functional equivalent of the World War II field army, and cooperate with it accordingly, (59) but his argument, also like Rippe's, ignores the problem of a counterpart headquarters for the tactical air force -- AAFCE could not function with eight ATAF or eight ATOC in Central Europe, and the US Air Force is unlikely to provide a numbered tactical air force for each Army corps committed to a major contingency operation. Even if the Air Force were to establish a counterpart operational air headquarters -- the equivalent of the World War II TAC or the NATO ATOC -- for

every Army corps, the tactical air force that commanded these new headquarters would still not have a counterpart Army headquarters to adjudicate the competing requests of the corps. (60) Field Circular 100-16-1 tends to agree with Cardwell, for its preface states,

The fundamental operational tenets of the AirLand Battle concept ... cannot be fully realized within the context of single corps operations. Rather, the broader perspective of a theater of operations where large formations, involving multiple corps, conduct an operational-level campaign is needed to visualize the complete execution of the doctrine. (61)

Unfortunately, Field Circular 100-16-1 also reflects the Army's current state of fuzzy thinking about the operational level of war. Like the J-SAK documents, the field circular does not clearly distinguish between a theater of war, a theater of operations, and a joint force area of operations; between a US unified commander, a combined theater or area commander, and a joint force (subordinate unified command or joint task force) commander; between a theater army commander and a land component commander; between a theater air force commander and an air component commander. It does not address the issue of the collocation of operational air and land force headquarters to plan and execute joint air-land operations, but instead provides for the exchange of liaison and coordination elements. It does not distinguish between campaigns and operations, but rather discusses theater campaigns, land campaigns, and air campaigns, as if the theater functional components were designing and executing independent campaigns within the same theater of operations, rather than interdependent operations as part of one overall theater campaign. Perhaps this is a matter of semantics, but as Jomini wrote, "good

definitions lead to clear ideas." (62)

The designation of Land Component Commander is confusing because one is never sure if the user means the theater army (Army Component) commander of a unified command in a theater of war, or the commander of a multiservice (USA/USMC) functional command charged with the prosecution of land operations for a joint force (joint task force or subordinate unified command) in a theater of operations. Field Circular 100-16-1 routinely refers to the operational responsibilities of the theater army commander when he functions as LCC, but in a theater of operations, the LCC need not be the theater army commander. In fact, there is no historical precedent for the theater army commander also being the LCC. (63)

A similar but worse problem exists with the term Air Component Commander. Because the Air Force emphasizes its theater-wide perspective, there exists confusion as to whether Air Component Commander refers to the theater air force commander of a unified command in a theater of war, or to the commander of tactical air force in a theater of operations. The post-Kasserine command structure in the Northwest African Theater is the model that most Air Force arguments use as the ideal theater command structure, but consider the facts. Spaatz was a theater air force commander under Tedder, whose air command served two theater of operations -- Northwest Africa and the Middle East. Coningham was Spaatz' tactical air force commander, responsible for all air operations in the combat zone. Alexander was not the combined theater army commander, (64) and had no theater-wide operational responsibilities for all of Northwest Africa; he was an army group commander responsible only for the combat zone in Tunisia and

later Sicily. Alexander's counterpart was therefore Coningham, not Spaatz; Spaatz had no counterpart in Northwest Africa.

Army/Air Force joint doctrine should anticipate that any future theater of war will normally be organized as a US unified command, probably with a parallel combined command structure. It will normally have a US theater army that functions primarily as a support organization, and a counterpart US theater air command.

At the level of the theater of operations, two possible conditions may exist. The first condition exists when a theater of operations -- established as a US subordinate unified command or joint task force, probably with a parallel combined command -- has a senior operational land force headquarters, commanded by a Land Force Commander. Whether this headquarters is an independent corps, a field army, or an army group, it must have a counterpart operational air headquarters with which to plan and execute air-land operations jointly. This operational air headquarters will normally be a numbered tactical air force, commanded by a Tactical Air Force Commander.

The second condition exists when the commander of the theater of operations directly controls two or more subordinate land forces, without designating a senior land force headquarters. This condition reflects reality in the NATO Central Region, where AFCENT exercises direct operational command over two army groups, and in Korea, where Combined Forces Command exercises direct operational command of one combined and three ROK field armies. Under this condition, each operational land force headquarters should have a counterpart operational air headquarters under the centralized control of a numbered tactical air force. If the

theater of operations is large enough to require more than one numbered tactical air force, they may be subordinate to a theater tactical air force. Within AFCENT, for example, AAFCE is the theater tactical air force; it exercises operational command over two tactical air forces that cooperate with the theater's two army groups. Alternatively, the theater commander may choose the SHAEF model and exercise the same direct operational command of his numbered tactical air that he has over his land forces. He would then have to establish an air section within his joint headquarters to perform the functions of a theater tactical air force, perhaps under the supervision of an Air Force deputy theater commander. Regardless of the actual air command structure, however, the World War II case studies make one point clear -- the Land Force Commanders in such a large theater of operations properly interface with the numbered Tactical Air Force Commanders, not the Theater Tactical Air Force Commander or the Theater Air Section.

Apportionment, Allotment, and Allocation

Any discussion of apportionment, allotment, and allocation necessarily supports the conclusion that there are no separate and independent air and land campaigns in a theater of operations, but only interdependent air and land operations that facilitate the objectives of a (hopefully) unified theater campaign. It is a given that the Theater Commander apportions air power -- only he has the theater-wide, multi-service perspective to decide between the potentially conflicting desires of the air and surface forces and thus prevent another Tunisia or Sicily. The operational issue is whether the theater's Tactical Air Commander should allocate

sorties -- the US solution -- or allot air units to subordinate operational air headquarters habitually associated with operational land headquarters -- the NATO solution. The findings of this study indicate that the US should adopt the NATO solution.

The Need for a Tactical Air Division

To implement the NATO solution, the US Air Force needs an intermediate operational level headquarters below the numbered tactical air force, to perform the functions performed by the TAC in World War II and by the ATOC in NATO, thus restoring the proper balance between centralized control and decentralized execution. This monograph proposes the establishment of such a headquarters -- a Tactical Air Division, commanded by an Air Force general officer -- reporting to the tactical air force commander but collocated with the headquarters of the land force with which it is habitually associated. In AFCENT, this land force would be the independent corps [until NATO reestablishes the field army]. In Korea, it would be the field army, since the tactical air force interfaces with Combined Forces Command. In CENTCOM, it could be a corps headquarters or the Third Army advanced headquarters, depending on who controls land operations in the combat zone while the Third Army main headquarters functions as theater army headquarters. The air division commander would control all offensive and defensive air operations in an area that roughly corresponds to that of his counterpart headquarters, just as the World War II TAC did. The tactical air force commander would allot the air division a variable number of fighter-bomber wings and the requisite number of special purpose aircraft sorties for force packaging. The tactical air force commander would be free to

assign the tactical air division specific CA and AI missions, or to shift air units from one air division to another, just as the Ninth Air Force did in World War II. Within these constraints, the air division commander would be able to make the allocation decision and all other operational level decisions required to plan and execute joint air-land operations with his counterpart land force commander. This proposal represents the decentralized execution of World War II, and provides the proper balance between the Air Force requirement for flexibility and the Army requirement for responsiveness.

AirLand Battlefield Control Measures

The problem with the US FSCL is that it treats all space beyond it as of no consequence to any higher land headquarters, based upon a decision made at corps level. The ACC may target anything he chooses beyond the FSCL, without coordinating the effects those targets will have on land operations. This is clearly in conflict with AirLand Battle's efforts to synchronize deep operations with the current battle in order to shape future combat actions. Moving the FSCL further out, perhaps to the forward limit of the LCC's area of responsibility, would cloud the issue of what constitutes close air support and, more importantly, endanger the survivability of A-10 and other dedicated CAS aircraft. It would seem that a better solution is to move the FSCL to within cannon range of the FLOT and restore its original purpose as a no-bomb line for CAS. Beyond the FSCL, joint doctrine should delineate specific zones of the battlefield for each level of land and joint headquarters, similar to zones of the NATO model. The division, corps, field army, army group, and joint

force would each have an assigned reconnaissance and interdiction zone. The Air Force would no longer define their air operations solely in terms of their effects on land operations; it would recognize that all its air operations affect land operations, and coordinate all its AI missions with the appropriate land or joint headquarters. Once headquarters collocations make joint planning and targeting cells a reality, this should not present an insurmountable problem.

CONCLUSION

The spirit of air-ground cooperation forged between the First US Army and the IX Tactical Air Command at Au Gay is essential to the successful prosecution of air-land operations. There are many reasons why joint Army/Air Force doctrine does not reflect this spirit today. Both Services have made their share of mistakes since their 1947 divorce proceedings. Nevertheless, the adoption of J-SAK and other joint initiatives indicate that both Services are now willing and able to put aside past differences and begin to rekindle the spirit of air-land cooperation that contributed so greatly to the Allied victory in World War II. By surfacing the doctrinal differences that still divide the two Services at the operational level of war, and proposing solutions to them, this author hopes to hasten the process.

END NOTES

1. Colonel Huba Wass de Czege, Letter to the Editor, Military Review (January 1986), pp 85-87 (hereafter Wass de Czege).
2. Major Stephen T. Rippe, An Army and Air Force Issue: Principles and Procedures for AirLand Warfare (Fort Leavenworth, Kansas: US Army Command and General Staff College, 1985), p 3 (hereafter Rippe).
3. Rippe, p 127.
4. In World War II, an air command was a tactical and administrative air unit subordinate to a numbered air force and comprising a variable number of air divisions, wings, groups, and/or squadrons.
5. Wesley F. Craven and James L. Cate (editors), The Army Air Forces in World War II. Volume II. Europe: TORCH to POINTBLANK (Chicago: The University of Chicago Press, 1949), p 137 (hereafter Craven and Cate II).
6. Ibid, pp 107-108.
7. Ibid, p 140.
8. Rippe, p 12.
9. General William W. Momyer, Airpower in Three Wars (Washington, D.C.: Government Printing Office, 1978), p 40 (hereafter Momyer).
10. Major General Lewis H. Brereton, then commanding the US Army Middle East Air Force, described the WDAF system and its significance in a report to Headquarters USAAF dated 23 August 1943, but Eisenhower apparently did not learn of the system until Tedder visited his headquarters in December 1942, to argue for the establishment of a theater air command. See Craven and Cate II, pp 28-29 and 106-108.
11. US War Department, Field Manual 100-20, Command and Employment of Air Power (Washington, D.C.: Government Printing Office, 21 July 1943), p 1 (hereafter Field Manual 100-20).
12. Craven and Cate II, pp 28-29.
13. Richard H. Kohn and Joseph P. Harahan (editors), Air Superiority in World War II and Korea (Washington, D.C.: Government Printing Office, 1983), pp 32-33.
14. Field Manual 100-20, pp 1-2.
15. Ibid, p 4.
16. Ibid, pp 10-11.
17. Ibid, p 11.

18. George F. Howe, Northwest Africa: Seizing the Initiative in the West. United States Army in World War II. Mediterranean Theater of Operations (Washington, D.C.: Government Printing Office, 1957), p 673.
19. Lieutenant Colonel Albert N. Garland and Howard McGaw Smythe, Sicily and the Surrender of Italy. United States Army in World War II. Mediterranean Theater of Operations (Washington, D.C.: Government Printing Office, 1965), pp 420-421 (hereafter Garland and Smythe).
20. Craven and Cate II, p 445.
21. Garland and Smythe, pp 106-107.
22. Ibid, p 421.
23. Craven and Cate II, pp 484-485.
24. Lieutenant General Elwood R. Quesada, "Tactical Air Power", Air University Quarterly Review (Spring 1948), p 41 (hereafter Quesada).
25. Momyer. p 51.
26. Ibid, pp 256-257.
27. US Air Force, Condensed Analysis of the Ninth Air Force in the European Theater of Operations (Washington, D.C.: Government Printing Office, 1984) (Reprint of 1946 Ninth Air Force study), pp 7-8 (hereafter Ninth Air Force).
28. Ibid, p 22.
29. Ibid, p 27.
30. Ibid, p 30.
31. Ibid, p 64.
32. Ibid, pp 121-122.
33. Wesley F. Craven and James L. Cate (editors), The Army Air Forces In World War II. Volume III. Europe: ARGUMENT to V-E Day (Chicago: The University of Chicago Press, 1951), p 149 (hereafter Craven and Cate III).
34. Ibid, pp 58-59.
35. Ibid, p 203.
36. Ninth Air Force, p 24.
37. Rippe, p 3.

38. The US Air Force assumes that a numbered tactical air force will normally be able to range the entire theater of operations with its aircraft. When the theater is so large that this is not the case, as in the NATO Southern and Central Regions, the theater commander may establish a theater tactical air command to control two or more numbered tactical air forces. The numbered tactical air force may find itself the counterpart of a field army or an army group, depending on the density of land forces assigned to operate in its area of responsibility.

39. The US Air Force defines tactical air operations in terms of their desired effects, but also speaks in terms of where they take place over the battlefield, and the degree of air-land coordination they require. CAS attacks enemy targets that directly affect current friendly surface operations; it is flown in close proximity to the friendly land forces it supports (short of the FSCL); and it requires positive or procedural control during its execution to insure detailed integration with the fires and movements of friendly surface forces. BAI also attacks enemy targets that directly affect current friendly land operations, but it is not flown in close proximity to friendly surface forces and thus does not require positive or procedural control during execution; it is, however, coordinated with friendly land forces (at TACC/BCE level) before execution. AI attacks the enemy's military potential before he can bring it to bear against friendly forces; because AI targets are normally beyond the FSCL, AI requires no positive or procedural control during execution and all planning and coordination occur above corps level.

40. Quesada, p 43.

41. Air apportionment is the determination of the percentage or priority of the total expected air effort that will be devoted to the various tactical air operations or geographic areas for a given time.

42. In current Air Force/Army doctrine, BAI is a subcategory of AI, not a separate tactical air operation grouped with CAS under close air support.

43. Air allocation is the conversion of the apportionment percentages and priorities into the number of sorties per aircraft type for each air operation and geographic area.

44. TRADOC Pamphlet 525-16, Joint Operational Concept for Joint Attack of the Second Echelon (J-SAK) (Fort Monroe, Virginia: US Army Training and Doctrine Command, 13 December 1962), p 1-8.

45. Rippe, p 45.

46. Allotment is the temporary change of assignment of tactical air units from one ATAF to another. It is equivalent to the shift of an Army division from one corps or army group to another.

47. In NATO, the Army Group establishes the RIPL to delineate the forward limit of its corps' areas of responsibility for air and surface reconnaissance and interdiction. There is no equivalent line in US doctrine.

48. In NATO, the corps establishes the FSCL to delineate the forward limit of its divisions' areas of responsibility for deep operations. The NATO FSCL is thus a forward boundary as well as a fire control measure.

49. This argument is based on the author's personal experience during an Air Force BLUE FLAG exercise. Official NATO doctrine contained in ATP-27(B), Offensive Air Support Operations, follows the US doctrine by defining AI and BAI in functional, not geographic terms.

50. US Army Command and General Staff College, Field Manual 100-5, Operations (Final Draft) (Fort Leavenworth, Kansas: US Army Command and General Staff College, 28 October 1985), p 3-47.

51. JCS Publication 1 defines air superiority as, "That degree of dominance in the air battle of one force over another which permits the conduct of operations by the former and its related land, sea, and air forces at a given time and place without prohibitive interference by the opposing force", and air supremacy as, "That degree of air superiority wherein the opposing air force is incapable of effective interference" (JCS Publication 1, p 21).

52. General Sir Nigel Bagnall, "Concepts of Land/Air Operations in the Central Region: I", RUSI (September 1984) p 60; and Air Marshal Sir Patrick Hine, "Concepts of Land/Air Operations in the Central Region: II", RUSI (September 1984), p 66.

53. Rippe, p 126.

54. Ibid, p 57.

55. Ibid, p 105.

56. Ibid, p 66.

57. US Central Command is organized with Ninth Air Force as theater ACC and Third Army dual-hatted as theater army and field army, but the Third Army is primarily a planning vice operational headquarters in peacetime, and the issue of whether Third Army will control Marine ground forces as LCC remains unresolved.

58. Colonel Thomas A. Cardwell, "AirLand Battle Revisited", Military Review (September 1985), pp 9-10 (hereafter Cardwell).

59. Wass de Czege, p 86.

60. Cardwell, p 10.

61. US Army Combined Arms Combat Development Activity, Field Circular 100-16-1. Theater Army, Army Group, and Field Army Operations (Fort Leavenworth, Kansas: US Army Combined Arms Combat Development Activity, 18 December 1984), preface.

62. Baron de Jomini, The Art of War (Translated by Captain G.H. Mendell and Lieutenant W.P. Craighill) (Philadelphia: J.B. Lippincott & Co, 1862) (Reprinted by Greenwood Press, Westport, Connecticut, n.d.), p 230.

63. In Korea, the same Army general officer serves as theater commander, theater army commander, and LCC, but he does not maintain a separate LCC headquarters. Instead, he exercises direct control of his subordinate field armies through a single joint/combined theater headquarters.

64. There were two national theater army commanders, one US (Eisenhower) and one British (Alexander), both dual-hatted as combined operational commanders.

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